

REMARKS

At the time of the Office Action dated December 10, 2003, claims 2-12, 14-16 and 18 were pending and rejected in this application. Claim 14 has been amended by incorporating certain limitations of claim 15 therein, and claim 16 has been amended by incorporating certain limitations of claim 18 therein. Claims 11 and 12 have been amended to recite that the first and second portions are immediately adjacent to one another and are separated from one another by an isolating feature, and claims 15 and 18 have been amended to recite that the first transistor is a N-type transistor and the second transistor is a P-type transistor. Applicants submit that the present Amendment does not raise any new issues nor add any new matter to the application.

APPLICANTS REQUEST WITHDRAWAL OF THE FINALITY OF THE PRESENT OFFICE

ACTION

Applicants submit that the present Office Action dated December 10, 2003, has improperly been designated as final. In this regard, the Examiner is referred to M.P.E.P. § 706.07(a), which clearly states:

Furthermore, a second or any subsequent action on the merits in any application ... will not be made final if it includes a rejection, on newly cited art ... of any claim not amended by applicant or patent owner in spite of the fact that other claims may have been amended to require newly cited art. (emphasis added)

In the Office Action dated September 3, 2003, claims 2-12, 14-16 and 18 were rejected either under § 102 or § 103 of 35 U.S.C. based upon Bertin. In the Amendment filed October 14, 2003, none of claims 2-12, 14-16 and 18 were amended. However, in the present Office Action, claims 2-12, 14-16 and 18 are rejected under § 102 or § 103 of 35 U.S.C. based upon Dennison et al. As such, the Examiner has rejected all the pending claims, which were not amended, on

newly cited art (i.e., Dennison et al.). Thus, despite the cancellation of claims 19 and 20 in the Amendment filed October 14, 2003, it is improper under M.P.E.P. § 706.07(a) for the Examiner to designate the present Office Action as final. Applicants, therefore, respectfully solicit withdrawal of the finality of the present Office Action.

**CLAIMS 2-10, 14 AND 16 ARE REJECTED UNDER 35 U.S.C. § 102 FOR ANTICIPATION
BASED UPON DENNISON ET AL., U.S. PATENT NO. 6,537,891 (HEREINAFTER DENNISON)**

On pages three through six of the Office Action, the Examiner asserted that Dennison discloses a method of manufacture and a semiconductor device corresponding to that claimed. This rejection is respectfully traversed.

Independent claims 14 and 16 have been amended to include certain of the limitations of dependent claims 15 and 18, respectively. Since the Examiner did not reject dependent claims 15 and 18 for anticipation based upon Dennison, Applicants respectfully solicit withdrawal of the imposed rejection of claims 14 and 16, as amended, for anticipation based upon Dennison. Applicants further solicit withdrawal of the imposed rejection of independent claims 2-10 for anticipation based upon Dennison based upon the dependency of claims 2-10 on independent claim 14.

CLAIMS 11-12, 15 AND 18 ARE REJECTED UNDER 35 U.S.C. § 103 FOR OBVIOUSNESS

BASED UPON DENNISON "IN VIEW OF THE [EXAMINER'S] REMARKS"

On pages six and seven of the Office Action, the Examiner asserted that Dennison discloses the claimed invention or that the claimed invention would have been obvious in view of Dennison. This rejection is respectfully traversed.

With regard to the limitations previously presented in claims 15 and 18, now presented in independent claims 14 and 16, the Examiner stated the following:

Regarding claims 15 and 18, Dennison discloses the semiconductor device comprising all claimed limitations, except for the diffusivity of the second dopant into silicon is greater than the diffusivity of the first dopant into silicon. However, it would have been obvious to one having ordinary skill in the art at the time the invention was made that the diffusivity of the second dopant into silicon could be greater than, less than, or equal to the diffusivity of the first dopant into silicon since applicant has not disclosed that such diffusivity of the second dopant into silicon being greater than that of the first dopant into silicon solves any stated problem or is for any particular purpose, and it appears that the invention of Dennison would perform equally well with the diffusivity of first dopant and the second dopant being either the same or different.

Not only have Applicants already addressed the assertions underpinning this argument in the Amendment filed October 14, 2003, Applicants respectfully submit that the Examiner's assertion that "applicant [sic] has not disclosed that [the claimed limitations] solves any stated problem or is for any particular purpose" is factually incorrect.

With regard to the assertions underpinning the Examiner's arguments, the Examiner is referred to the paragraph spanning pages 14 and 15 in the Amendment filed October 14, 2003, which is reproduced, in part, below:

Limitations in a claim are not required to be described as being critical, as providing unexpected results, as solving a particular problem, or as providing a specific function. Instead, claims, and the limitations contained therein, are used to "particularly point out and distinctly claim the subject matter which the applicant regards as his invention." The Examiner is not free to assume a limitation/claim is obvious based solely on the Examiner's belief that the limitation/claim does not "solve any stated problem or is for any particular purpose." Furthermore, whether or not "the

invention would perform equally well," depending upon whether a feature recited in a claim is present or not, is not dispositive on the patentability of the claim.

Notwithstanding these arguments, Applicants have asserted that the particular limitations previously presented in claims 15 and 18 solve a particular stated problem. For example, the Examiner is referred to the last full paragraph on page two of the disclosure. In this paragraph, Applicants state that one problem is that the temperature/time profile for diffusing the dopants of N-type and P-type transistors cannot be optimized since these different transistors are formed using dopants having different diffusion characteristics. However, as stated in the last full paragraph on page seven of the disclosure, by doping the first portion with a first dopant and the second portion with a second dopant with the diffusivity of the second dopant into silicon being greater than the diffusivity of the first dopant into silicon, the N-type and P-type transistors can both be exposed to an optimal temperature/time profile. Dennison fails to express any recognition of the problem stated in Applicants' disclosure much less disclose Applicants' solution. Under such circumstances, the problem addressed and solved by the claimed invention constitutes an indicium of nonobviousness that must be given consideration regarding a conclusion of nonobviousness under 35 U.S.C. § 103. Claims 15 and 18, as amended, are also directed to this particular concept.

With regard to claims 11 and 12, the Examiner asserted that "it would have been well known in the art that isolating features such as shallow trench isolation are usually formed between semiconductor devices to isolate one device from the other." Applicants note that claims 11 and 12 have been amended to clarify that the first and second portions are immediately adjacent one another and that an isolating feature separates the first portion from the second portion. Notwithstanding the Examiner's comments regarding the obviousness of isolating

features, Applicants submit that Dennison fails to teach or suggest the limitations recited in amended claims 11 and 12.

As illustrated in Fig. 6 and described in column 3, line 66 - column 4, line 4 of Dennison, the chip disclosed by Dennison includes a chip memory array region and a chip peripheral region and these regions are separate from one another. Dennison further describes that fully depleted devices (i.e., devices over a thinner region) will be used in the memory array and partially depleted devices (i.e., devices over a thicker region) will be used in the peripheral circuit. Dennison, however, does not teach or suggest that both a thinner portion and a thicker portion will be immediately adjacent and separated by an isolating feature. In contrasting the claimed invention with the disclosure of Dennison in context of the structure described by Dennison, the claimed invention is directed to have the thinner portion and the thicker portion in the same region (i.e., in either the memory array or in the peripheral circuit). In contrast, Dennison discloses that each region (i.e., either the memory array or the peripheral circuit) includes only thinner portions or only thicker portions, but not both. Thus, the limitations recited in claims 11 and 12 further renders the claimed invention non-obvious in view of Dennison.

Applicants, therefore, respectfully submit that one having ordinary skill in the art would not have found the claimed invention obvious in view of Dennison. Thus, Applicants solicit withdrawal of the imposed rejection of claims 11-12, 15 and 18 under 35 U.S.C. § 103 based upon Dennison in view of the Examiner's comments.

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Applicants have made every effort to present claims which distinguish over the prior art, and it is believed that all claims are in condition for allowance. However, Applicants invite the Examiner to call the undersigned if it is believed that a telephonic interview would expedite the prosecution of the application to an allowance. Accordingly, and in view of the foregoing remarks, Applicants hereby respectfully request reconsideration and prompt allowance of the pending claims.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417, and please credit any excess fees to such deposit account.

Respectfully submitted,

MCDERMOTT, WILL & EMERY

A handwritten signature in black ink, appearing to read 'SDP', is written over the firm name.

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